AAHA | Guidelines

AMERICAN ANIMAL HOSPITAL ASSOCIATION

Canine Vaccination Guidelines

TOOLKIT

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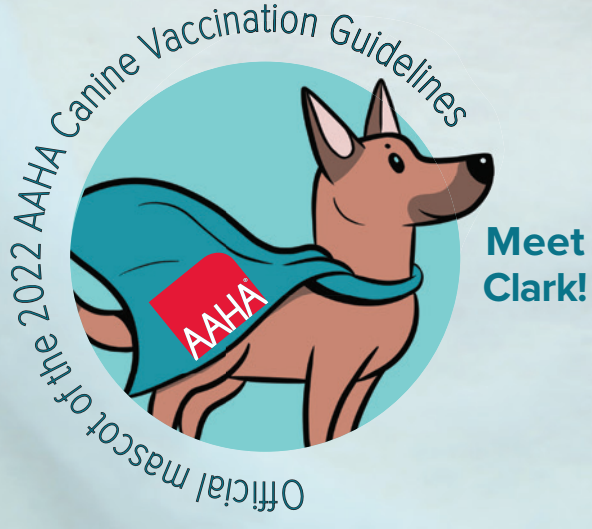

Meet Clark!

Contents

Guidelines at a Glance

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The 2022 AAHA Canine Vaccination Guidelines

Communication is Key

Some clients feel anxious about giving vaccines to their dogs. It's important to discuss the need for vaccines to protect their dogs from disease.

Vaccines also protect against diseases that can be passed from dogs to humans and are crucial for public health.

When the whole veterinary team is onboard with vaccine protocols, clients receive consistent messaging.

What's Core for This Dog?

Check out our vaccine calculator at **aaha.org/canine-vaccinations**

Vaccinating Dogs in Shelters

Dogs in shelters are more likely to be exposed to infectious diseases, and vaccine protocols should reflect this enhanced risk.

See the *2022 AAHA Canine Vaccination Guidelines* at **aaha.org/canine-vaccinations** for information on designing vaccine plans for shelter dogs.

aaha.org/canine-vaccinations

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3 Takeaways

All dogs should have the following ***core*** vaccines:

- Distemper
- Adenovirus
- Parvovirus
- +/- Parainfluenza (often included in combination vaccines)
- Rabies

Other vaccines are **just as essential** to an individual dog's health, depending on the dog's lifestyle and risk factors. These include:

- Leptospira (should be considered for **most dogs** based on increased prevalence)
- Lyme disease
- Bordetella
- Canine influenza
- Rattlesnake toxoid

Vaccination plans start with the required vaccines for all dogs, but you determine what additional vaccines are necessary for each of your patients.

The *2022 AAHA Canine Vaccination Guidelines* empower you to make the best possible personalized vaccine recommendations for your patients based on their lifestyle and exposure risks.

2 Actions

For every dog, ask: **What's "core" for this patient?**

Remember, **core vaccines are required for all dogs**, but other vaccines should also be considered "required" for certain dogs. Vaccine plans **should be personalized and based on risk levels and good clinical judgement**.

Train your team to talk to clients about vaccines and why they are a vital part of their dog's health plan.

1 Thing to Never Forget

When vaccines are overdue or unknown, consider that the benefits of vaccinating outweigh the risks in most cases. A good rule of thumb is: **When in doubt, vaccinate.**

Resources for Veterinary Teams

aaha.org/canine-vaccinations

Read


2022 AAHA Canine Vaccination Guidelines

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Tools


2022 AAHA CANINE VACCINATION GUIDELINES

Guidelines at a Glance

Meet Clark!

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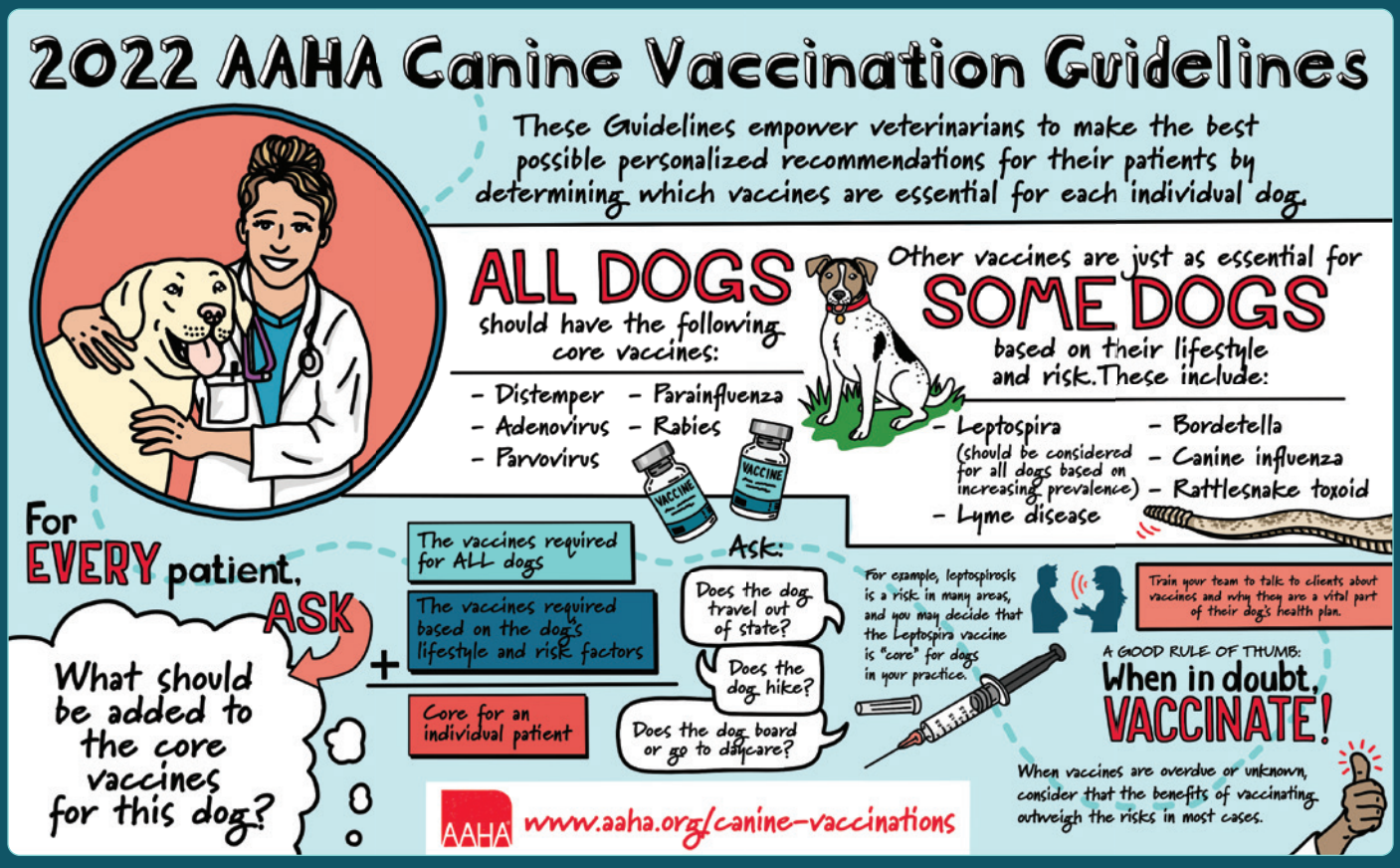
Takeaways

Communication is Key

What's Core for This Dog?

Vaccinating Dogs in Shelters



Reframing Noncore Vaccinations for the Veterinary Team

Noncore vaccinations aren't merely "add-ons" to core vaccine protocols. They are an essential component of a complete vaccination plan for an individual patient.

Even though "noncore" vaccinations protect against important infectious diseases that can cause illness and death in our canine companions, many dogs are not receiving these crucial vaccines. Check out a few sobering statistics, from Elanco's first-ever study analyzing noncore vaccination rates of dogs in the U.S.:

37% of dogs were NOT being vaccinated against leptospirosis, despite increased prevalence and exposure risk in ALL dogs across the U.S.[1]

What do the guidelines say about this?

- Most dogs should be considered at risk of leptospirosis.
- Leptospirosis does not only affect rural dogs.
- Dogs that spend any time outdoors, may be exposed to rodents, and/or go to boarding or daycare, should be considered at risk.

More than 40% of dogs in Lyme endemic states with potential exposure to the tick vector are NOT vaccinated against Lyme disease.[1]

What do the guidelines say about this?

- Dogs who live in or travel to regions where tick vectors are present should be vaccinated.
- Vaccines should be accompanied by appropriate monthly tick control.
- For dogs traveling to areas with Lyme disease, vaccines should be completed 2-4 weeks prior.

These percentages are likely underestimates of how many dogs are not vaccinated with essential noncore vaccines.

Vaccine Reactions[2]

In a study of more than 1 million dogs, the two factors most associated with a vaccine reaction were:

Number of injections given

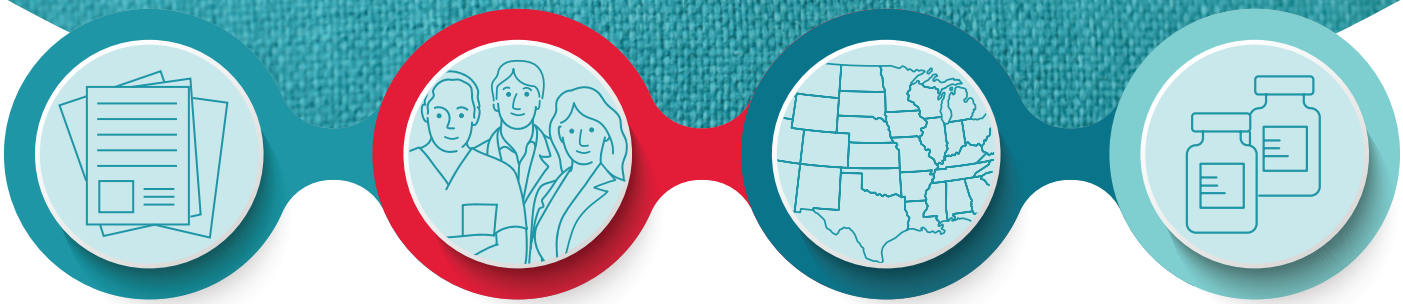
Dogs weighing less than 20 lbs

What do the guidelines say about this?

- Reactions most commonly occur due to the extra proteins and materials in vaccines, not the vaccine antigens themselves.
- Minimizing the number of extra proteins a dog is exposed to in a single visit, for example by giving combination vaccinations, may decrease the risk of a reaction.

1. Malter KB, Tugel ME, Gil-Rodriguez M, et al. Variability in non-core vaccination rates of dogs and cats in veterinary clinics across the United States. *Vaccine*. 2022;40(7):1001-9.
2. Moore GE, Guptill LF, Ward MP, et al. Adverse events diagnosed within three days of vaccine administration in dogs. *J Am Vet Med Assoc*. 2005;227(7):1102-8.

How Can the Veterinary Team Increase Noncore Vaccine Compliance?



Make sure practice protocols align with expert recommendations. See the *2022 AAHA Canine Vaccination Guidelines* at aaha.org/canine-vaccinations.

Bring the entire veterinary team on board with training to present consistent messaging to clients.

Identify certain "noncore" vaccines as core for YOUR patients and YOUR practice, based on environment, disease prevalence, and risk.

Offer combination vaccines to increase compliance.

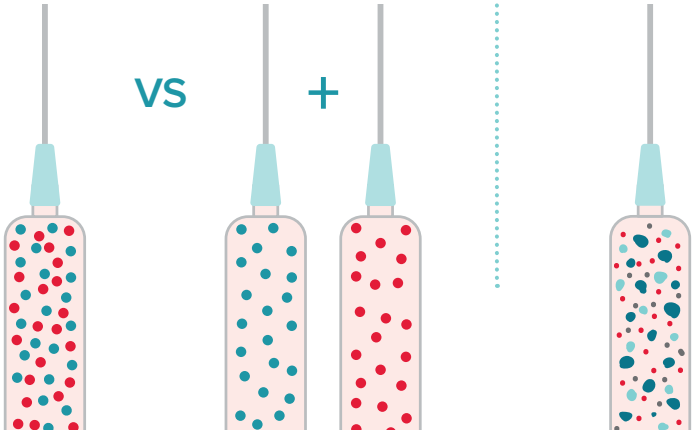
What About Adverse Reactions?

Adverse Reactions

Combination vaccines are not more problematic than single component.

Adverse reactions are related to other vaccine components, not the pathogen itself.

Rabies may have more adverse event risk because of its protein array.



Strategies

- ✓ Reduce number of injections at each visit (spacing different vaccines by 2 weeks) or use combination vaccines
- ✓ Mix as directed—don't mix and match diluents
- X Do NOT split doses
- ✓ Choose nonparenteral versions of vaccine if appropriate
- ✓ Pre-medicate with diphenydramine or a single anti-inflammatory dose of glucocorticoids if patient has a history of reactions

How “Core” Affects Compliance

According to Elanco’s study,* clinics that treated certain vaccines, like leptospirosis, as core rather than noncore in their practice had vaccination rates of 99.9–100%.

Elanco *Technical Bulletin*

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Elanco *Clinical Applications*

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*Malter KB, Tugel ME, Gil-Rodriguez M, et al. Variability in non-core vaccination rates of dogs and cats in veterinary clinics across the United States. *Vaccine*. 2022;40(7):1001-1009.

When considering vaccination, components such as geographic location, patient lifestyle, and other risk factors may actually make a lifestyle vaccine core for a particular animal.

Clinical Applications, June 2022

10 Ways Vet Techs Could Save a Life

Questions or concerns about vaccines that you aren't finding the answers for in your clinic?

Visit www.aaha.org/aaha-guidelines/2022-aaha-canine-vaccination-guidelines/faqs or scan the QR code for more information!

1 Get to know your patient

Ask if they have any fun new hobbies like going camping, a new doggie play place, or something else! These new changes may increase their risk of exposure to certain diseases, and may change their core vaccine needs.

2 Assess your clients

Are they seasoned dog owners or are they first-time pet parents? Consider what information needs to be provided that dog owners can add to their awareness about their pets' wellbeing and health status.

3 Clear up your communication

Communication between veterinarians and vet techs is key when it comes to providing top care for your patients–be an extension of each other, not just two sides of one coin! From relaying an in-depth, accurate history to thorough documentation of conversations surrounding vaccines, you can give yourself and your team a head start for every future appointment to come.

4 When in doubt, talk vaccines

If the owners don't know when their dog was last vaccinated or if they EVER got vaccinated, let them know that the benefits of vaccinating without a vaccine history outweigh the potential risks in most cases.

5 Listen to and learn about the worries surrounding vaccines

Let's face it, there is a lot of hubbub surrounding vaccines. Be aware of the fears and concerns surrounding canine vaccines and where they stem from so that you can soothe them with the best medicine–knowledge.

6 Have resources prepared

Do your clients prefer to read and research on their own? Prepare some reputable information resources ahead of time that you can give them, like AAHA's "Top 10 Things You Need To Know About AAHA's Canine Vaccination Guidelines".

7 When owners refuse to vaccinate

Discuss with your clinic and veterinarians if any alternatives like antibody/antigen titers can be offered that still give a peek into that patient's immunity status. If they refuse those options, have a set plan with your team on how to move forward so that everyone is on the same page, and what changes that might mean if the patient needs to be hospitalized in your practice. The veterinary team should be aware of local laws requiring rabies vaccinations and be prepared to discuss this with pet owners.

8 Get familiar with the health reasons vaccines may not be indicated

Whether your patient is receiving chemotherapy, has had reactions in the past, has a vaccine-related autoimmune disease, or something else, these are helpful things to know about when taking a history!

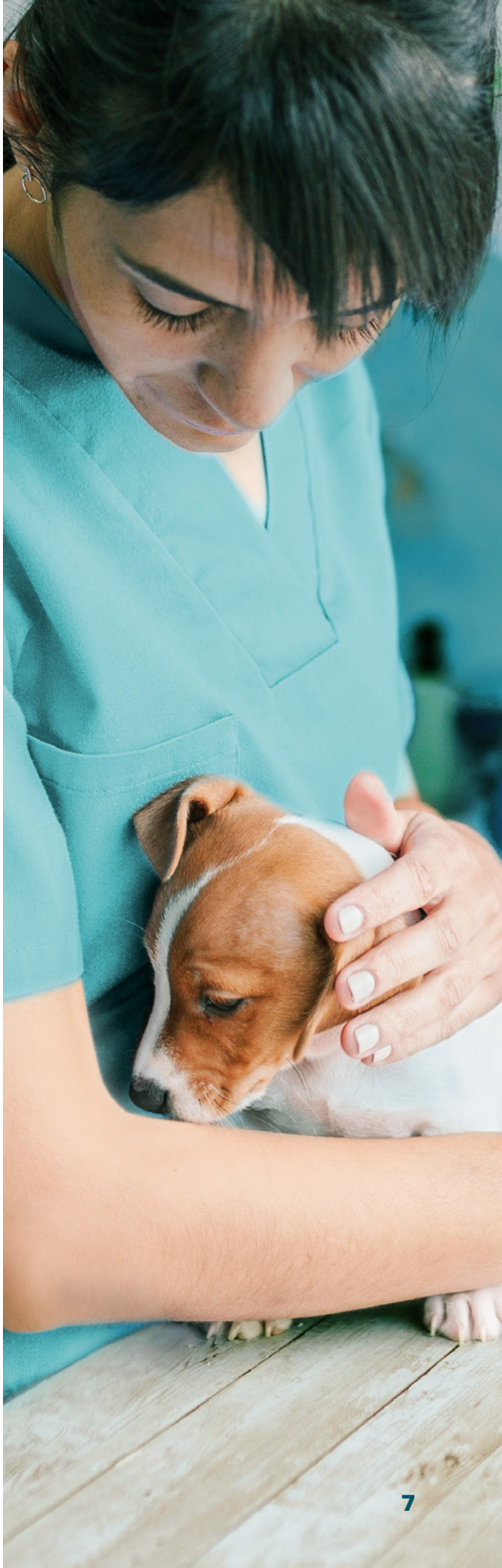
9 What if a pet is vaccine exempt?

Talk with your veterinarians and learn the difference between vaccine exemption for medical reasons and vaccines declined by the owner. Know your state's vaccine laws for pets with medical issues that exclude them from being able to receive vaccines and have information ready for pet owners so that they know what extra precautions need to be taken with an unvaccinated pup.

10 Know when you've done a good job

As veterinary professionals, it is our duty and ultimate goal to advocate for and care for the animals that we are given responsibility over. In an ideal world, everyone would understand and trust the science that those in the veterinary industry field have poured their hearts and efforts into. If someone declines to vaccinate their dog despite all your resources, time, patience, and best efforts to do right by your patient, know you have still upheld your oath by giving the compassion and care that was asked of you.

Technicians have the power to save lives. Improving vaccine compliance is a team effort!



Leptospirosis

Nearly every dog is potentially at risk of exposure—even dogs who live in urban areas

Animals can be infected and spread the disease without showing signs

Lepto lowdown

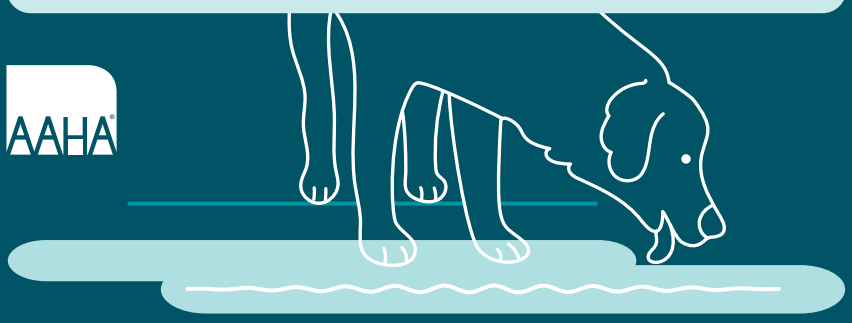
Caused by Leptospira bacteria—many types exist

Can cause severe liver and/or kidney disease, and can be fatal

Can infect lots of different animals including dogs, cats, rodents, and people!

What are the signs?

Some dogs will get very sick from leptospirosis; others will show mild or no signs. Signs, if they occur, can include increased thirst and urination, vomiting, loss of appetite, excessive panting, and low energy.

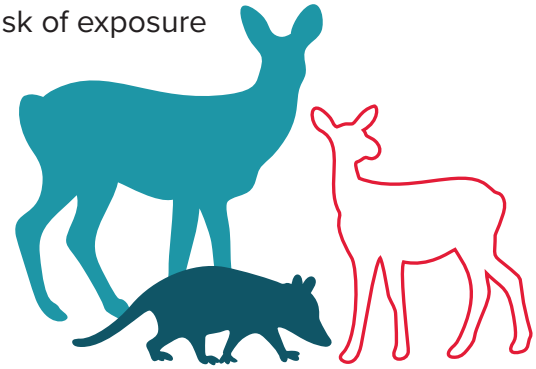


Avoid letting dogs drink or play in slow-moving or standing water–but since bacteria could be shed anywhere by animal carriers, vaccination is the best way to protect dogs

Talk with your veterinarian about whether vaccinating against leptospirosis is recommended for your dog

Who's at risk?

Because lots of different animals can have leptospirosis, many without showing signs, most dogs have some risk of exposure



Wildlife, such as rats, mice, deer, and opossums, and some dogs can be carriers—they aren't sick but shed the bacteria in their urine

Dogs are usually exposed through contact with infected urine or contaminated water or objects

Scan QR code to download this resource

Vaccination protects dogs—and people!

Vaccination is highly effective against the most common types of leptospirosis

Vaccines can't stop exposure, but they can help keep dogs from getting sick—and they can help prevent dogs from shedding Leptospira bacteria in their urine that can spread to humans

How do we know if it's lepto?

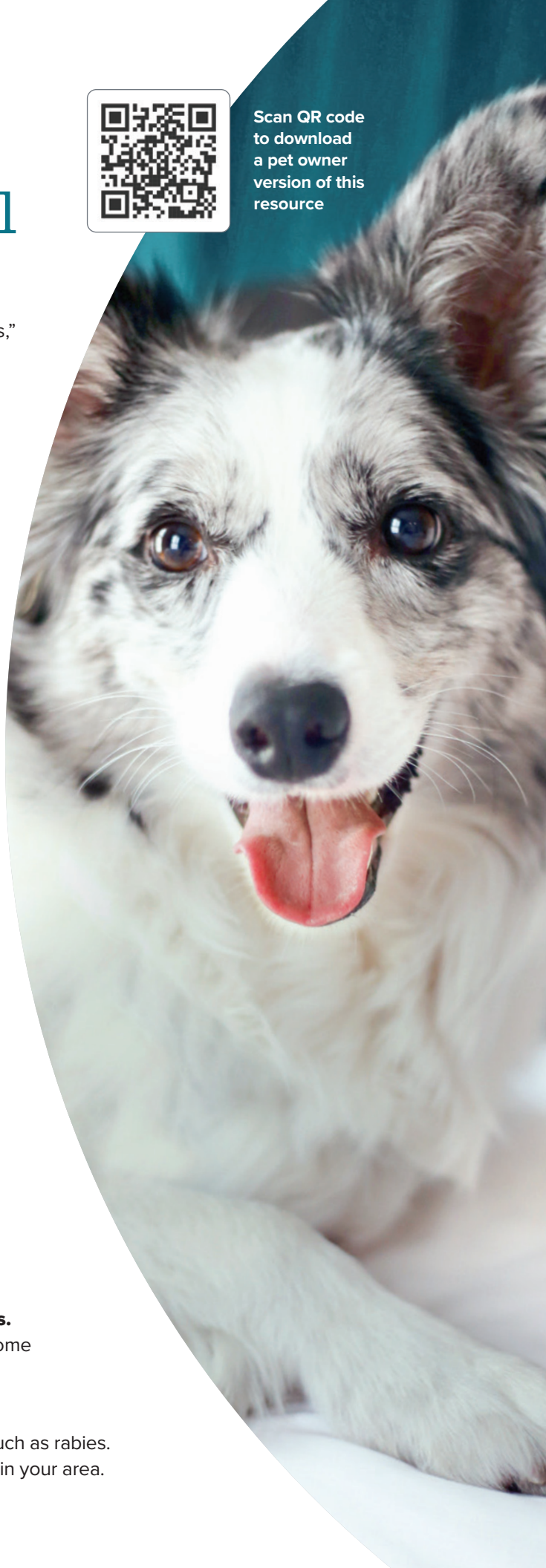
Liver or kidney values on bloodwork may be elevated, but this doesn't always happen right away—so many dogs are already very sick by the time anyone suspects leptospirosis

Blood and urine tests can confirm leptospirosis

Treatment with antibiotics, and sometimes hospitalization and IV medications, can be successful, but some dogs become too sick and don't recover

Why Vaccines Are *Not* One-Size-Fits-All

Scan QR code to download a pet owner version of this resource



When clients call and want to know how much their dog's wellness visit will cost, or when they say, "I only want the necessary vaccines," what should you tell them?

You can start by making sure they know there's no one vaccine protocol that suits every dog—or every family. The *2022 AAHA Canine Vaccination Guidelines* designate some vaccines as core—meaning every dog should have them—but other vaccines may be just as essential for a specific dog's health, depending on a variety of factors. The guidelines help your veterinarian determine the best protocol to keep you AND your pet healthy and happy!

During a client's visit, you and the rest of the veterinary team ask questions that help the veterinarian make a personalized recommendation about which vaccines are "core" for the dog in front of them, meaning the vaccines that are essential for that dog's health and wellbeing.

When clients ask, you can talk to them about some of the factors that go into a personalized recommendation:

Geography

Some diseases, such as leptospirosis, are spreading to areas we haven't seen it commonly before. Other diseases such as canine influenza can have unpredictable outbreaks anywhere.

Genetics

Some dogs may be more prone to certain vaccine reactions. Being aware of this increased risk can help your veterinarian recommend modifications to the protocol to ensure your pet can still get the protection they need.

Physical Factors

Not all dogs are created equal! Factors such as a dog's size, current health state, or current diseases can impact your personalized recommendation.

Lifestyle

Your dog's lifestyle has a big impact on their disease risk factors. Avid hikers? Frequent travelers? Doggie daycare? These are just some of the questions that can affect the recommended protocol.

Local Laws

Some jurisdictions have specific requirements for vaccinations such as rabies. Your veterinarian is your best resource for knowing what is required in your area.

Scan QR code to download this resource

Core *for* You

A personalized vaccine plan for:

_____

Your veterinary team has carefully evaluated your pet's lifestyle and risk factors and determined the following vaccines are core for you. Congratulations on taking such excellent care of your dog!

VACCINE		NEXT DUE DATE
Distemper	✓	
Adenovirus	✓	
Parvovirus	✓	
Canine parainfluenza virus	✓	
Rabies	✓	
Leptospira		
Lyme disease		
Bordetella		
Canine influenza virus		
Crotalus atrox (rattlesnake)		

Prepared by: _____

Based on the *2022 AAHA Canine Vaccination Guidelines.*

Top 10 Owner Objections to Canine Vaccines

"My dog is too small."

Small dogs can still be adequately and safely protected against the same diseases as their larger counterparts. Veterinarians may recommend reducing the number of vaccines administered at a single office visit, thereby reducing antigenic stimuli. Giving less than the USDA-approved vaccine volume is not recommended since the reduced amounts were not clinically studied, nor approved by the manufacturer and USDA. USDA-approved lower volume vaccines can improve the vaccine experience for a patient.

In addition, diseases do not discriminate based on size. Small dogs are just as likely to be exposed to virulent viruses and bacteria. In the case of leptospirosis, small breed dogs are frequently infected, because of urban and suburban exposure to wildlife reservoirs and rodents.

"My dog has a lot of other health issues."

For dogs with existing medical conditions or immune-mediated disease, consideration should be given to the stability and condition of the patient, the need for vaccination, and prudent ways to minimize adverse event risk. Individualized assessments are key.

"That lepto vaccine is really reactive."

Historically, veterinarians and dog owners alike have been concerned about reactions to leptospiral vaccines. However, these formulations have now been altered to minimize the likelihood of such reactions. Today, these vaccines have a low reaction rate, with 53 adverse events per 10,000 doses.[1,2] Most of these reactions are minor, and serious anaphylactic reactions were reported no more for dogs given leptospiral vaccines than for any other.

In addition, leptospirosis is an important zoonotic pathogen. Newer vaccines have been documented to dramatically reduce or prevent carrying and shedding leptospires for exposed dogs, potentially protecting humans even if indirectly.

"My dog had a reaction once."

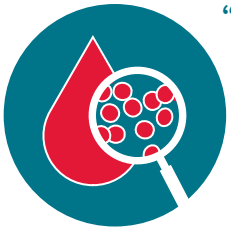
We cannot presume reactions will automatically recur. Precautions such as limiting the number of vaccines administered are prudent, as is prevaccination administration of diphenhydramine. Single anti-inflammatory doses of glucocorticoids, if administered, do not impair humoral responses to vaccination.

"He (puppy adopted at under 16 weeks of age) already got all his vaccines from the shelter/rescue."

Maternally derived antibodies can block the canine distemper vaccines until 12-14 weeks of age and block canine parvovirus vaccines until 13-15 weeks of age (possibly even longer). Revaccination is recommended at 2-4 week intervals until greater than 16 weeks old (18-20 weeks of age for puppies in areas of high risk).

"I can get them cheaper online/at the feed store."

Improper storage and handling can decrease the efficacy of the vaccine, leaving the dog vulnerable to disease. The vaccines must be kept in a temperature controlled environment before the time they leave the manufacturer to the time of their administration. The CDC recommends pharmaceutical grade or stand-alone household refrigeration units to properly store vaccines, with regular temperature monitoring and airflow typically 2-3 inches from walls and doors. It's unlikely these conditions are maintained in non-veterinary/medical facilities or during shipping to a home.



"I'd rather have titers."

While human vaccination titers are increasingly common, the same clinical studies of scale do not exist for dogs. Unfortunately, vaccination titers are rarely recommended, due to factors including:

- Lack of large scale clinical trials of household dogs.
- No standardization of documentation/results across laboratories.
- Existing studies used methods that do not produce naturally occurring disease.
- Biologic reality that vaccines almost never protect 100% of the population 100% of the time.
- In almost all dogs, the disease will result from an interaction between the individual dog, the pathogen and environmental cofactors.

These factors, combined with the cost and questionable interpretation of the results, make vaccine titers a poor choice for a normal healthy animal.

"My dog had those vaccines when she was a puppy."

While longer (>3 year) duration of immunity after vaccination has been suggested for some vaccines such as canine distemper virus and parvovirus, this is largely unsubstantiated in the peer-reviewed literature.

"My dog's breed/parents had a reaction."

Adverse event risk occurs at the individual patient level. The genetic predisposition for individuals exists within some family lines, not entire breeds, but selectively increases risk overall for some breeds.

Although you cannot change the dog's genetics, you can reduce the risk of vaccine associated adverse reactions by reducing the number of vaccines (or needle pokes) given in single visit.[3]

If possible within guidelines and manufacturer recommendations, administering vaccines nonparenterally, e.g., mucosally or intranasally, can also reduce adverse event risk.

General vaccine hesitancy/skepticism

Vaccination is a safe, effective and necessary part of their dog's healthcare. It acts as a barrier to zoonotic diseases that can affect client households.

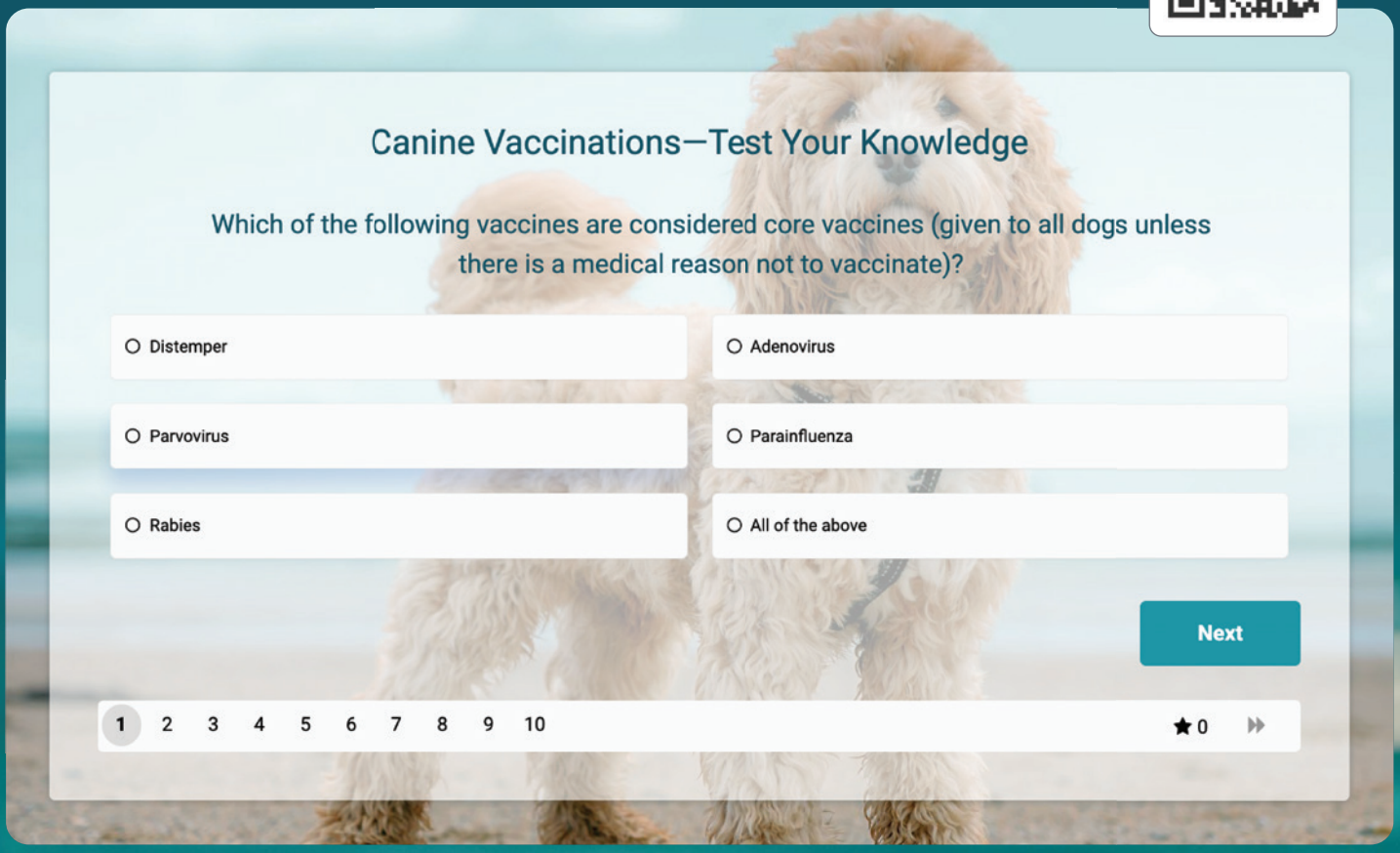
Canine vaccines have been so successful in reducing the impact of some diseases, owners may feel like vaccinations are no longer needed for some diseases. Unfortunately, disease prevalence is still a threat, as evidenced by outbreaks of distemper and parvovirus in shelters, and in outbreaks of measles in human populations where reduced vaccine coverage exists.

1. Yao PJ, Stephenson N, Foley JE, et al. Incidence rates and risk factors for owner-reported adverse events following vaccination of dogs that did or did not receive a Leptospira vaccine. *J Am Vet Med Assoc* 2015; 247:1139–45.

2. Robbins H. Adverse events in dogs given Leptospira vaccine. *Vet Rec* 2017;180:257.

3. Moore GE, Guptill LF, Ward MP, et al. Adverse events diagnosed within three days of vaccine administration in dogs. *J Am Vet Med Assoc*. 2005;227(7):1102-8.

Quiz Yourself!



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